

COURSE 3, TUTORIAL 6

AN OVERVIEW OF THE NSF SBIR/STTR SOLICITATION



The National Science Foundation releases one SBIR and one STTR solicitation annually. Although the SBIR and STTR programs are frequently discussed in tandem, at NSF these are separate solicitations with similar release dates. America's Seed Fund powered by the National Science Foundation, the NSF's SBIR/STTR program, has four submission windows that allow startups and small businesses the flexibility to submit a full proposal at any time within a window, as long as they have been invited to submit a proposal and meet the eligibility criteria. *NSF encourages proposals in all areas of science and engineering. An exact fit into its topics or subtopics is not required.*

At the beginning of the NSF SBIR solicitation is a section entitled **"Important Information and Revision Notes"**. Potential Applicants are encouraged to read this carefully as it contains information that must be addressed. NSF requires a Project Pitch that outlines the project's objectives, technical innovation and associated technical risks. The Project Pitch is submitted on-line and provides NSF with the opportunity to provide feedback prior to the full proposal submission process, ensuring that proposers do not expend time or resources preparing full proposals that are clearly not aligned with the NSF SBIR/STTR program objectives. To submit a full proposal for NSF SBIR Phase I funding, the small business **MUST** submit a Project Pitch and receive an official invitation (via email) from NSF SBIR/STTR Program Director. In this section NSF also

introduces its interest in "Deep technologies" which refers to technologies based on discoveries in fundamental science and engineering with the potential for profound societal impact. Other important guidelines relate to the format of biographical sketches and pending support.

Startups and entrepreneurs are required to submit a written Project Pitch.

The NSF solicitation guidelines are fairly short – about 20 pages, in fact. The guidelines highlight information that you may have seen in other agency solicitations – but there is a very different flavor to the NSF solicitations. NSF is a granting agency and provides considerable latitude to the proposer. It seeks cutting-edge, high-risk, high quality scientific, engineering, or scientific research that will transform scientific discovery into both social and economic benefit.



NSF requires that projects show commercial and societal impact. NSF clearly states in the topics document that the list of topics provided should be considered as examples and does NOT represent an exhaustive list of topics and subtopics of potential interest. The NSF SBIR/STTR programs encourage proposals in all areas of science and engineering. Therefore, an exact fit into one of these topics or subtopics is not required.

IS YOUR RESEARCH INNOVATIVE?

Sometimes it may be hard for an individual to determine if the proposed research is truly innovative and if it shows the promise of high commercial and scientific impact. To that end, NSF provides the following guidelines. It is suggested that in formulating your concept and reviewing the scientific and market literature, you ask yourself:

- › Has this ever been attempted and/or successfully done before?
- › Are there still technical hurdles that the NSF-funded R&D work could overcome?
- › Does this project have the potential to disrupt the targeted market segment?
- › Does the proposed research have good product-market fit as validated by customers? In other words, is there a verified need, and
- › Does the proposed project offer the potential for societal impact?

NUMBER OF SUBMISSION IS LIMITED

In the **Award Information** section, NSF presents a number of important facts. In the eligibility section it clearly reiterates that the firm must have received an official invitation to submit a proposal from the cognizant NSF SBIR/STTR Program Director. “An organization may submit no more than one SBIR Phase I proposal per full proposal submission window. Submission of an invited SBIR Phase I full proposal to a given submission window precludes the same applicant to the concurrent STTR Phase I solicitation. These eligibility constraints are strictly enforced. In the event that an organization exceeds this limit, the first proposal received will be accepted, and the remainder will be returned without review.” In this way NSF assures that it can engage a greater number of new applicants. NSF also clarifies that no person may be listed as the principal investigator for more than one proposal submitted to this solicitation. SBIR proposals submitted to NSF, by definition, do not have co-PIs.

The small business MUST submit a Project Pitch and receive an official invitation (via email)

NSF provides an interesting list of Do's and Don'ts in the Proposal guidelines. Here's a few of the Don'ts. Do NOT submit a proposal which has not yet received an invitation via email from a cognizant NSF SBIR/STTR Program Director. Proposals without this invitation will be returned without review. Do Not submit a Project Description that is more than 15 pages long. Do not submit a proposal that lacks sufficient intellectual/technical or broader/commercial potential substance to justify review; which does not contain research proposed in science, engineering, or education or is not responsive to the solicitation objectives.

Make sure that you only upload documents to the Supplementary Documents section that NSF has identified as being acceptable. One supplemental document that NSF likes and is worthwhile highlighting is Letters of Support for the Technology. Such letters are optional and up to three letters may be submitted. Letters of support should demonstrate that the company has initiated dialogue with relevant stakeholders (potential customers, strategic partners or investors) for the proposed innovation and that a legitimate business opportunity may exist should the technology prove feasible.

NSF EVALUATION PROCESS AND REVIEW CRITERIA

The proposal guidelines clarify how NSF proposals are processed and reviewed. As with other agencies there is an administrative review process at the outset to assure that proposals meet NSF's requirements. Those that meet the criteria are carefully reviewed by a scientist, engineer, or educator serving as an NSF Program Director, and usually by three to ten other persons outside NSF either as ad hoc reviewers, panelists, or both, who are experts in the particular fields represented by the proposal. These reviewers are selected by the Program Director charged with oversight of the review process.

When evaluating NSF proposals, reviewers will be asked to consider what the startups or small businesses want to do, why they want to do it, how they plan to do it, how they will know if they succeed, and what benefits could accrue if the project is successful. These issues apply both to the technical aspects of the proposal and the way in which the project may make broader contributions. To that end, startups or small businesses will be evaluated against NSF's three [Peer Review Guidelines](#): Intellectual Merit: The



Intellectual Merit criterion encompasses the potential to advance knowledge; Broader Impacts: The Broader Impacts criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes; and, The Commercial Impact: the activity to lead to significant outcomes in the commercial market.

If you are interested in transforming scientific discovery into societal and economic benefit be sure to explore the NSF SBIR and STTR solicitations.

FastLane Help Desk

1-800-673-6188 | <https://seedfund.nsf.gov> or email sbir@nsf.gov